FACT SHEET

JNTF FACT SHEET 99-010

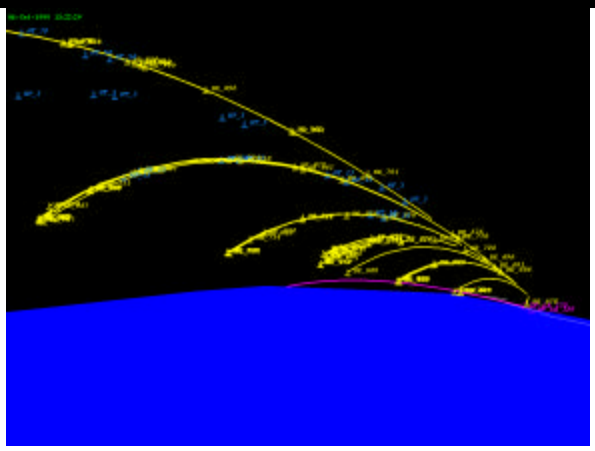
Battle Management, Command, Control, and Communications (BMC3) Element Support Center (BESC) & BMC3 Element Laboratory (BEL)

MISSION

The BESC & BEL missions are dynamic and evolve to meet the changing needs of the BMDO NMD Joint Program Office and its user, US Space Command. The current focus, is to provide the resources (personnel, facilities, hardware, software, and communications) to support the systems level engineering, integration, testing, user training, product assessments, Independent Verification and Validation (IV&V), and analysis of the Ballistic Missile Defense Organization (BMDO) National Missile Defense (NMD) program.

WHERE WE FIT IN

BESC develops a product called the BESC Integration, Test and Evaluation (BITE) Unit that integrates disparate systems using real-time message translations. BESC is focused on interfacing BMDO's developing BMC3 capability to legacy operational and test systems representing NMD Elements. NMD Elements include such systems as the Upgraded Early Warning Radar (UEWR), the Defense Support Program (DSP) CONUS Ground Station (CGS), and the Aerospace Fusion Center (AFC). The BEL provides outstanding facilities, equipment, and expertise to support US Space Command, the Joint Program Office, and the Lead System Integrator (LSI), to define the NMD BMC3 Element, and to validate tactics, techniques, training, and procedures.



CAPABILITIES

BESC and BEL provide a rapidly configurable environment for use in real-time demonstrations and assessments using NMD assets, either simulated, under development or legacy representations. The BEL provides the opportunity for joint and combined operations for combat developer activities as well as continuity for the deployment effort. It is the focus for Training, Assessment, the NMD War Fighting Cell, and development efforts. BESC and BEL configurations typically support two to three simultaneous activities. BESC uses the BITE Unit and/or the evolving BMC3 software to execute the following:

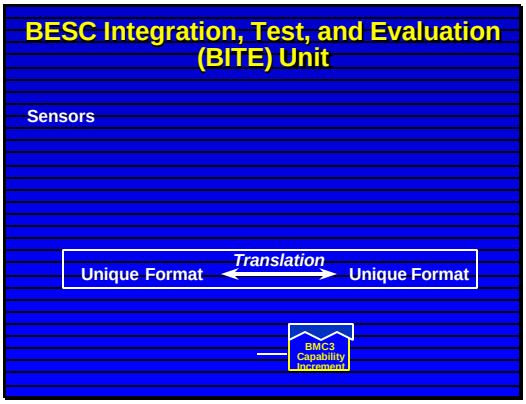
- NMD System Test Support including Integrated Ground Tests (IGTs), Pre-Mission Tests (PMTs), Risk Reduction Flights (RRFs), Integrated Flight Tests (IFTs)
- UEWR Development Program Support including the Radar Interface Data Fusion Project (RIDFP), and the Distributed Tracking Experiment (DTE)
- BMC3 Development Program Support including development integration and test, and Naval Surface Warfare Center (NSWC) Independent Verification and Validation

- NMD User Support including Formal Increment Assessments (FIAs), Battle Planning Exercises (BPEx's), NMD Command and Control (C2) Simulations (C2Sims), and Training

SYSTEM INTERFACES

As a message and communication protocol translator, or gateway, between diverse systems, the BITE Unit can support various real-time translation configurations, employing actual systems, system simulations, or hybrids. The BITE Unit is designed to support data classified as collateral Secret and/or Secret / Formerly Restricted Data (S/FRD). Generally, the systems interfacing to the BITE Unit require no modification. System interfaces currently supported include:

- Inter-Range Instrumentation Group (IRIG) formatted Global Positioning Service (GPS) timing systems
- Secure Telephone Unit (STU) / Asynchronous, SPACECOM Digital Information Network (SDIN), Advanced Data Communication Control Procedures (ADCCP) data communications
- Ethernet, Fast Ethernet, Internet Protocol (IP), User Datagram Protocol (UDP), and Transmission Control Protocol (TCP) network protocols
- DSP CGS interfaces
- Joint National Test Facility/ AFC interfaces
- NMD BMC3 interfaces
- Precision Acquisition Vehicle Entry Phased Array Warning System (PAVE PAWS) UEWR radar interfaces
- Ballistic Missile Early Warning System (BMEWS) UEWR radar interfaces
- Space Based Infrared System/Wargaming Model (SBIRS/WM)
- XonTech, Inc., CueGenerator (CueGen)
- Advanced System Architectures (ASA) Target Oriented Tracking System (TOTS)
- Global Command and Control System (GCCS) – future interface
- UEWR simulation systems at the Centralized Integrated Support test Facility (CISF)
- Integrated System Test Capability, BMC3, and UEWR at the Advanced Research Center (ARC)



FACILITIES and ADPE

BESC is a 6400 sq. ft. facility. The BEL area has an additional 4500 sq. ft. The BESC includes office space, a laboratory area housing desktop Automated Data Processing Equipment (ADPE), and a separate equipment room for larger ADPE, communications, and cooling equipment. Both the BESC and the BEL have 40-50 person conference rooms, equipment with video replay, multi-media distribution, and overhead projection capabilities. BEL's user-support focus provides four command-center rooms sharing a common wall with BEL's conference room. These rooms are configured to both allow activity isolation and conference room viewing.

THE WAY AHEAD

BESC and BEL provide a rapidly configurable environment for real-time NMD integration, demonstration, and assessment. BESC and BEL will continue to support NMD System Test and BMC3 and UEWR Element development and will grow as NMD prepares for a deployment decision in 2000.

AVAILABILITY

If you would like more information on the capabilities of the BESC & BEL, please call:

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